

BEST AVAILABLE COPY Application Serial No. 10/089,950**RECEIVED
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5 Claims 1, 2, 4, 8, 10, 11, 13, 14, 15 and 16 are rejected under 35 U.S.C 102 (b) as being anticipated by Kate *et al*. The remaining claims are the subject of a rejection under 35 U.S.C. 103 for obviousness. Applicant is surprised by the arguments raised by the Examiner. The Examiner states that "spread spectra are used in telecommunications". However, Kate is completely silent about any telecommunications. Additionally, Kate is 10 completely silent about the term "spread" etc.

The Examiner refers to page 1099, right column, penultimate paragraph, where "TV sets" are mentioned. However, the mentioning of "TV sets" only refers to whether there are two channels or four channels, etc. The mentioning of "TV sets" does not relate to the 15 introduction of additional information into an audio signal in an inaudible way.

Furthermore, Applicant does not understand what the Examiner wishes to say by stating that "Kate et al teaches bit representation that is categorized and processed signals based on information to be added." Possibly, the Examiner refers to the fourth paragraph in the 20 right hand column on page 1099. However, here it is only stated that one has to distinguish, whether one wished to add an audio signal or any data (bits). This paragraph furthermore states that one can add "correlated auxiliary signals" which are to be considered as a bit stream of data. However, this passage does not state that these information bits are spread, based on the spread spectrum modulation by combining the 25 bits with the spread sequence. This passage states that one can introduce information bits by the method as illustrated in Fig. 2 of page 1100, which is completely different from any spreading operation.

Furthermore, this passage is completely silent about the fact that the spreading operation, 30 as defined in the third paragraph of Claim 1, takes place before a spectral representation of the spread information is generated. Indeed, Kate is completely silent about generating a "spectral representation of the spread information signal"

Application Serial No. 10/089,950

Thus, the Examiner only assumes that there is a spread sequence and spread spectrum modulation in Kate because Kate, on its face, makes absolutely no mention of this.

Telecommunications have nothing to do with TV sets and, particularly, with the number of channels one has in a TV set. The penultimate paragraph, right had column of page 1099, simply states that one can have a TV set having two channels, i.e. a stereo TV set, or that one can have a 4-2-4 coding, in which, for the original four channels, two channels are generated and, from the two channels, the four audio channels are reconstructed again. This has nothing to do with telecommunications and with spread spectrum modulation.

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When Fig. 2 is considered, it becomes clear that the "spectral spread information signal" corresponds to the signal A before attenuation, i.e. one line of the "spectral spread information signal" corresponds to the long line of the signal A (additional) in the left upper corner of Fig. 2 the "weighting" corresponds to the "attenuate" step and the "summing" of Claim 1 corresponds to "adding" step. However, it is clear that the signal A in Fig. 2 represents a data bit or a (correlated) audio signal, as stated in the fourth paragraph, fourth line of the right column on page 1099. The steps of combining and generating as defined in Claim 1 are not shown in Kate and are not implied by mentioning a TV set; and further have nothing to do with telecommunications. The Examiner's mentioning of "telecommunications" is even more surprising because Kate discloses neither the term "telecommunications" nor the term "spread."

Regarding the advantages of using the spread spectrum technique for spreading the bits before introducing the bits into audio signal, please refer to Applicant's remarks in Applicant's reply to the previous office action.

With regard to the Examiner's remarks under section 4 of the Office Action, regarding the step of combining, Applicant emphasizes that "enable inaudible addition of extra information to an audio signal" has nothing to do with the step of combining. Furthermore, the statement "spread sequence is applied to telecommunications" does not make any technical sense.

Application Serial No. 10/089,950

Furthermore, stating that "telecommunication" is an application of television or radio" does not make any sense in the context of introducing information into a data stream, including data about spectral values representing a short-term spectrum of an audio signal.

5 Regarding the step of generating, the Examiner refers to page 1097, right hand column, first paragraph. However, this passage only concerns subband filtering the audio signal, which corresponds to the step of processing as indicated by the Examiner. However, this passage neither discloses a "spread information signal" nor that a spectral representation of the spread information signal is generated. Importantly, the step of generating clearly
10 says that the spread information signal which is to be introduced into the audio signal is processed to generate the spectral representation. However, nothing like this is disclosed in the paragraph mentioned by the Examiner, nor is it mentioned anywhere else in Kate.

15 Furthermore, generating a spectral representation of the bits to be introduced into the audio signal, as mentioned in the fourth paragraph, right had column on page 1099 of Kate, does not make sense because a spectral representation of a sequence of bits (simply representing data (bits) does not make any sense.

20 In view of this, Kate discloses neither the step of combining nor the step of generating and, therefore, cannot anticipate the subject matter of the invention, as defined in Claim 1.

25 Regarding amended independent Claim 11, the Examiner refers to page 3, first paragraph. However, the Examiner completely overlooks the limitation "and including an indication of the value of the predetermined amount" which has been introduced into Claim 11 by Applicant in reply to the previous Office Action. Even on page 7, first paragraph, the Examiner simply states that Claim 11 is similar in scope and content of Claim 1. However, this is not at all correct because Claim 11 includes the limitation "and including an integration for the value of this predetermined amount" which is not at all included in Claim 1.

30 Furthermore, Kate does not disclose the step of quantizing so that "the noise energy introduced by quantizing is smaller than the psychoacoustic masking threshold by a predetermined amount".

Application Serial No. 10/089,950

Claim 1 does not include any step of quantizing and Applicant does not understand why the Examiner comes to this conclusion in the first paragraph on page 7.

5 Regarding the first paragraph of page 3, Applicant does not understand what the Examiner means by the second sentence. At the least, a restatement for the purposes of clarification is in order.

10 Regarding the second and third paragraphs of the first passage on page 3 of the Office Action, the Examiner refers to page 1097, left column, second to fourth paragraphs. Here, one can read the following sentence:

"the inaudibility is guaranteed if the sound power level of the added signal is kept below the masking threshold"

15 However, when Claim 11 is correctly read for its plain and unambiguous meaning, one can see that this claim does not include any limitation regarding the sound power level of the added signal or that this sound power level should be kept below the masking threshold.

20 Instead, the fourth paragraph of Claim 11 says that one has to perform a certain quantizing different from prior art quantizes in that one quantizes finer than required for masking purposes. Particularly, a signal is quantized so that the quantization noise is smaller than the psychoacoustic masking threshold by a predetermined amount. Thus, the step of quantizing is completely different from the statement in Kate that "the sound power level of
25 the added signal is kept below the masking threshold".

Finally, and once again, the Examiner completely ignores the limitation that an indication for the value of the predetermined amount is included in the bit stream. Applicant respectfully submits that this is a clear error in the Office Action. There simply is no
30 showing that Kate teaches each and every one of Applicant's claim elements, so there is no anticipation as required by 35 U.S.C. 102(b).

Application Serial No. 10/089,950

In view of the clear error, at least with respect to Claims 1 and 11, if the Examiner does not respond with a Notice of Allowance, then the next Office Action should not be a final Office Action. Applicant has not amended the claims with this submission, so there is no basis for arguing that the Applicant has raised issues that require a further search on the part of the
5 Examiner. Thus, reconsideration and withdrawal of the rejection for anticipation is earnestly solicited.

Should the Examiner deem it helpful, he is encouraged to contact Applicant's attorney, Michael A. Glenn at (650) 474-800.

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Respectfully submitted,

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